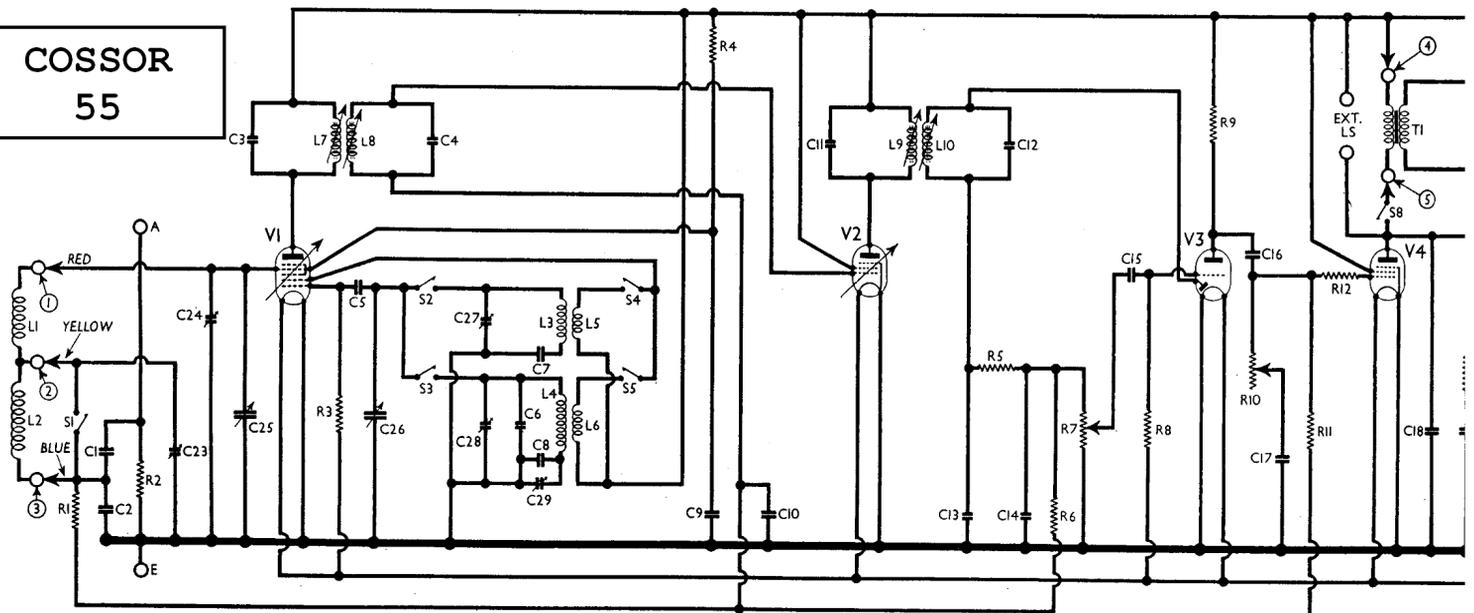


COSSOR 55



RESISTANCES		Values (ohms)
R1	V1 pentode CG decoupling	1,000,000
R2	External aerial shunt	10,000
R3	V1 osc. CG resistance	200,000
R4	V1 SG HT feed	20,000
R5	IF stopper	50,000
R6	AVC line decoupling	3,000,000
R7	Manual volume control; V3 diode load resistance	500,000
R8	V3 triode CG resistance	2,000,000
R9	V3 triode anode load resistance	500,000
R10	Variable tone control	2,000,000
R11	V4 CG resistance	2,000,000
R12	V4 grid stopper	100,000
R13	Part of fixed tone corrector	20,000
R14	V4 auto GB resistance	800

CONDENSERS		Values (μF)
C1	External aerial coupling and V1 pentode CG decoupling	0.01
C2	External aerial coupling and V1 pentode CG decoupling	0.0046
C3	1st IF transformer tuning condensers	0.000065
C4	1st IF transformer tuning condensers	0.000058
C5	V1 osc. CG condenser	0.0001
C6	Osc. circ. LW fixed trimmer	0.00005
C7	Osc. circuit MW tracker	0.000598
C8	Osc. circ. LW fixed tracker	0.00014
C9	V1 SG decoupling	0.05
C10	V2 CG decoupling	0.05
C11	2nd IF transformer tuning condensers	0.000065
C12	2nd IF transformer tuning condensers	0.00007
C13	IF by-pass condensers	0.00005
C14	IF by-pass condensers	0.00005
C15	AF coupling to V3 triode	0.05
C16	V3 triode to V4 AF coupling	0.01
C17	Part of variable tone control	0.003
C18	Parts of fixed tone corrector	0.001
C19	Parts of fixed tone corrector	0.005
C20	HT reservoir condenser	2.0
C21	Auto GB RF by-pass	0.1
C22	Auto GB AF by-pass	50.0
C23	Frame aerial LW trimmer	—
C24	Frame aerial MW trimmer	—
C25	Frame aerial tuning	—
C26	Oscillator circuit tuning	—
C27	Osc. circuit MW trimmer	—
C28	Osc. circuit LW trimmer	—
C29	Osc. circuit LW tracker	—

VALVE ANALYSIS

Valve voltages and currents given in the table (next col.) are those measured on our receiver when it was operating with a new battery, the HT section of which was reading 96V on load.

The receiver was tuned to the lowest wavelength on the medium wave band, and the volume control was at maximum; in order, however, to prevent the receiver from responding to a possible signal from the frame aerial plug was withdrawn from its socket, and a small screwdriver was wedged between its three wired pins to connect together the input CG and the AVC line.

Voltages were measured on the 400V scale of a model 7 Universal Avometer, chassis being negative.

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 1A7VG	86	1.1	54	1.3
V2 1N5VG	86	1.3	86	0.35
V3 1H5G	23	0.07	86	1.2
V4 1C5G	84	5.0	86	—

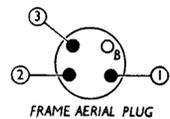
CIRCUIT ALIGNMENT

IF Stages.—Connect signal generator via a 0.1μF condenser, to control grid (top cap) of V1 and chassis. Have the frame aerials connected, but lying down at the rear of the chassis. Leave existing top cap connector of V1 in place, but short-circuit the oscillator section of the gang (C26). Feed in a 465 KC/S signal, and adjust cores of L10, L9, L8 and L7 in turn for maximum output. The wax sealing will first have to be softened with a hot screwdriver. Check these settings, then seal the cores again.

RF and Oscillator Stages.—With gang at maximum, pointer should be under the horizontal lines at the upper wavelength ends of the scales. The chassis, battery and frame aerials should be in their normal positions in the cabinet for the next adjustments. The necessary pre-set condensers can be reached through an aperture in the back of the set. The signal generator can be coupled by a turn or two of wire round the cabinet, or by connection to the external A and E sockets.

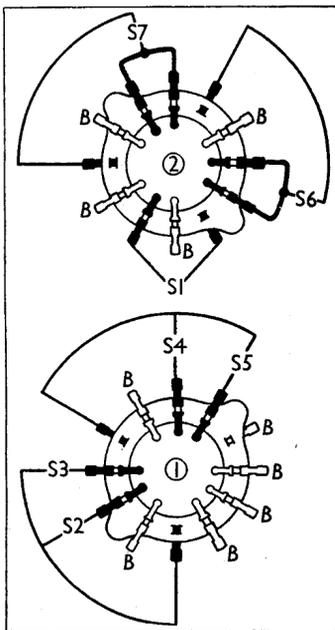
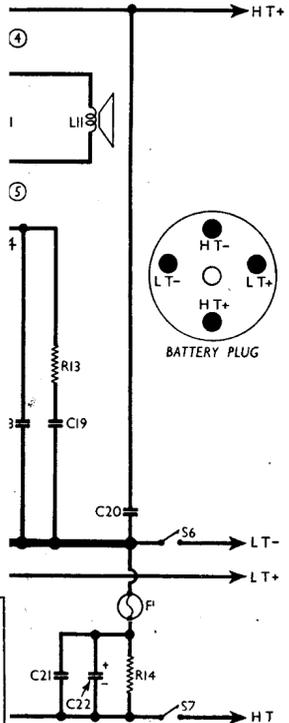
MW.—Switch set to MW, tune to 214m on scale, feed in a 214m (1,400 KC/S) signal, and adjust C27, then C24, for maximum output. There is no variable tracking on this band, but the calibration should be checked at about 520m.

LW.—Switch set to LW, tune to 1,200m on scale, feed in a 1,200m (250 KC/S) signal, and adjust C28, then C23, for maximum output. Feed in a 1,875m (160 KC/S) signal, tune it in, and adjust C29 for maximum output, while rocking the gang for optimum results.



Switch	HT+	HT-	LT+	LT-
OFF				
MW	○	○	○	○
LW	○	○	○	○

Switch Table



Diagrams of the two switch units as seen from the front of the underside of the chassis.

* Electrolytic. † Variable. ‡ Pre-set.

OTHER COMPONENTS		Approx. Values (ohms)
L1	Frame aerial windings	2.0
L2	Frame aerial windings	8.5
L3	Osc. circuit MW tuning coil	5.0
L4	Osc. circuit LW tuning coil	12.5
L5	Oscillator MW reaction coil	2.7
L6	Oscillator LW reaction coil	5.6
L7	1st IF trans. { Pri. ...	7.5
L8	1st IF trans. { Sec. ...	7.5
L9	2nd IF trans. { Pri. ...	7.5
L10	2nd IF trans. { Sec. ...	16.0
L11	Speaker speech coil	2.0
T1	Speaker input trans. { Pri. ...	600.0
T1	Speaker input trans. { Sec. ...	0.4
S1-S5	Waveband switches	—
S6	LT circuit switch	—
S7	HT circuit switch	—
S8	Speaker muting switch	—
F1	Fuse lamp	—